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11/14/03
PATENT
Attorney Docket No. 202413
Client Reference No. 142389.01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Kumbalimutt et al.

Application No. 09/502,689

Art Unit: 2157

Examiner: Sahera Halim

Filed: February 11, 2000

For: BACK-END DECOUPLED
MANAGEMENT MODEL AND
MANAGEMENT SYSTEM
UTILIZING SAME

DECLARATION UNDER 37 C.F.R. § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

1. We are the joint inventors of the above-identified application, and have been employed by the assignee of the above-identified application, Microsoft Corporation, at all times relevant hereto.

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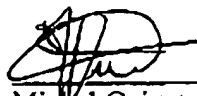
Jorg-Thomas Pfenning

Date

Quentin S. Miler

Date

9/22/2003



Michel Guittet

Date

Todd L. Paul

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Todd L. Paul

Joan 2 Paul 10/21/2003

Microsoft Patent Predisclosure Document

Title of Invention: Management model

Date: 06/30/99

Document Author(s): Vishwa Kumbalimutt

Prior Disclosure

[Has there been any disclosure of the invention outside of Microsoft? If so, please identify the party (or parties) to whom disclosed, as well as the date and circumstances under which the disclosure was made (signed/unsigned non-disclosure agreement, etc.). Disclosure may include such things as an offer for sale, a demonstration, or a publication describing a novel aspect of the invention.]

No

Introduction

[Please provide a high level description of the invention, including the names of the people who contributed to the invention.]

The Management model involves the definition of a standard set of interfaces on WMI providers that can be accessed by different types of User Interfaces like Web, MMC or command line interfaces. These providers, which have the standard set of interfaces, will become the basic building blocks of the infrastructure for Windows management, regardless of how the data is presented. These interfaces will act as a common point for doing syntax and semantic checks. This will eliminate redundancy by not requiring every UI component to implement the same functionality and will eliminate inconsistencies in behavior of different types of user interfaces.

Other contributors: Thomas Pfenning

Strategic Importance of Invention:

[Please provide reasons why you think patent protection for this invention is important to Microsoft. Factors to consider include (1) is it core technology; (2) is it a feature that gives Microsoft a competitive advantage; (3) is it a feature that our competitors would want to copy; (4) does it include new APIs, file formats, network protocols, data schema or other components relating to product interoperability (5) is it related to a standard. Please include who you consider the most likely competitors and/or competitive products for this technology.]

This management model will avoid the need to maintain multiple pieces of code that have to implement similar behavior. This will result in considerable saving of costs and also eliminate any inconsistencies that can occur as a result of maintaining multiple pieces of code.

Motivation for the Invention:

[Describe (1) the problem addressed by the invention (e.g., limitations of prior products of Microsoft, or others), and (2) your solution to the problem (including what "new" things your invention does and a high-level description of how it does them).]

Problem: In the existing model, management is done using MMC for Windows based management or Netshell for command line interfaces. Each of these components implements their own syntax and semantic checks for the various management tasks. This results in redundancy due to the fact that the same work has to be done for both MMC and Netshell. This can also lead to inconsistencies if any change is done in one place and not in the other.

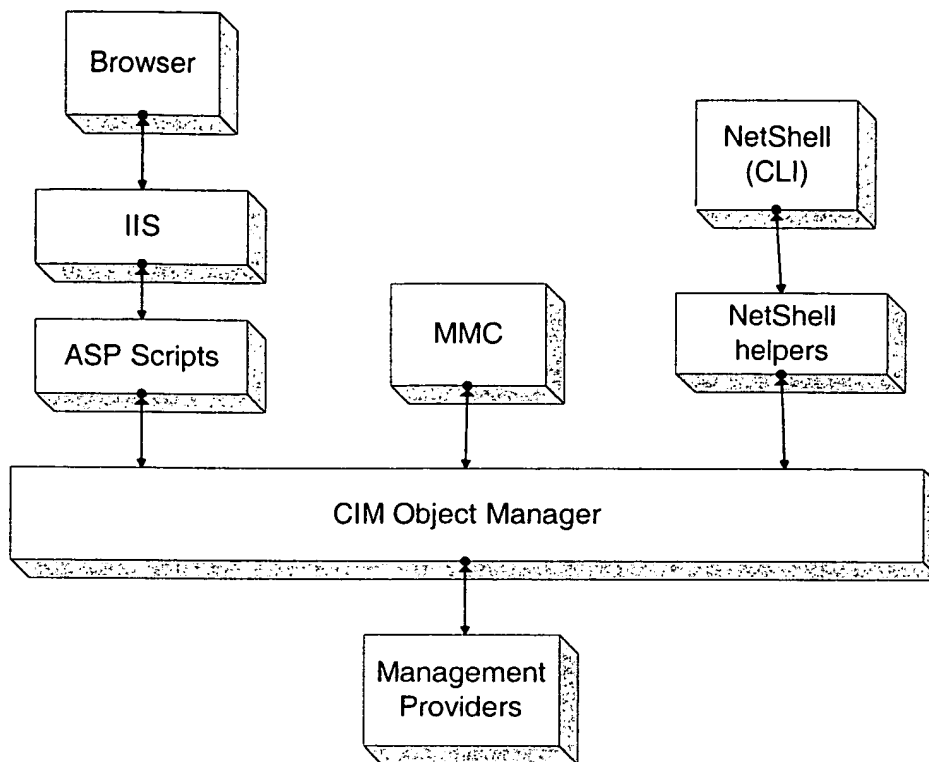
Solution: To define a standard set of interfaces that will be implemented at the provider level. These interfaces will be used by different kinds of User interfaces like Web UI, MMC and CLI to provide a consistent management model irrespective of which UI is being used. These interfaces include methods to set and get attribute values, get localized help strings for attributes, get default value for an attribute etc.

Description of the Invention:

[Describe your proposed implementation of the invention, including the architecture and design details of the implementation. The design details should include a description of the component parts of, and individual operations performed by, your implementation. The use of a specific example, showing how the invention solves the problem being addressed, can be particularly

helpful. You should also mention whether you have thought of any other implementations, or applications of, your invention. In most cases, 1-2 pages of description should be adequate to start the patent application process, although a more detailed description may greatly enhance the efficiency of the process.]

The architecture diagram is shown below.



The interfaces that have to be implemented by the provider are listed below:

Description	This method will be used to set a value to an attribute
Signature	HRESULT Set ([in] string attributeName, [in] VARIANT *pvValue);
Input Parameters	attributeName – is the name of the attribute whose value needs to be set pvValue – is the value that the attribute needs to be set to
Output Parameters	None
Return Value	S_OK – Success E_POINTER – Null Pointer specified E_INVALIDARG - Invalid Argument E_OUTOFMEMORY – Out of Memory

Description	This method will be used to retrieve the value of an attribute
Signature	HRESULT Get ([in] string attributeName, [out] VARIANT *pvValue);
Input Parameters	attributeName – is the name of the attribute whose value needs to be retrieved
Output Parameters	pvValue – the retrieved value of the attribute

Return Value	S_OK – Success E_POINTER – Null Pointer specified E_INVALIDARG - Invalid Argument E_OUTOFMEMORY – Out of Memory
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Description	This method will be used to get the default value of the attribute (if any).
Signature	HRESULT GetDefaultValue ([in] string attributeName, [out] VARIANT *pvValue);
Input Parameters	attributeName – is the name of the attribute whose default value needs to be retrieved
Output Parameters	pvValue – the retrieved value of the attribute
Return Value	S_OK – Success E_POINTER – Null Pointer specified E_INVALIDARG - Invalid Argument E_OUTOFMEMORY – Out of Memory

Description	This method will be used to get the list of valid values of the attribute. This can be used to show a list of values that the user can select from. This will eliminate the overhead of dealing with invalid entries that can result in expensive network roundtrips.
Signature	HRESULT GetValidValues ([in] string attributeName, [out] VARIANT *pvValue[]);
Input Parameters	attributeName – is the name of the attribute whose valid values needs to be retrieved
Output Parameters	pvValue – an array of valid values for the attribute
Return Value	S_OK – Success E_POINTER – Null Pointer specified E_INVALIDARG - Invalid Argument E_OUTOFMEMORY – Out of Memory

Description	This method will be used to get validation rules for the attribute (if any). The rules can have information on dependency on other attribute values. For example, if attribute A is set to value V, then attribute B has to be set to a non-zero value.
Signature	HRESULT GetValidValues ([in] string attributeName, [out] ValidationRule *pValidation[]);
Input Parameters	attributeName – is the name of the attribute whose validation rules needs to be retrieved
Output Parameters	pValidation – an array of validation rules for the attribute
Return Value	S_OK – Success E_POINTER – Null Pointer specified E_INVALIDARG - Invalid Argument E_OUTOFMEMORY – Out of Memory

Description	<p>This method will be used to get information about an attribute or method.</p> <p>If it is an attribute, then it can include a short description of the attribute, type information, Range of values (if any) etc.</p> <p>If it is a Method then it can include information for usage, input parameters, output parameters, return value etc.</p> <p>This will be used to display information about the attribute on the UI.</p>
Signature	HRESULT Help ([in] string attributeOrMethodName, [out] string *pHelp);
Input Parameters	attributeOrMethodName – is the name of the attribute
Output Parameters	pHelp – the localized help string
Return Value	S_OK – Success E_POINTER – Null Pointer specified E_INVALIDARG - Invalid Argument

Description	<p>This method will be used to save the Resource object to a persistent store. This will be used when the user needs to save the system configuration to a persistent store. The system wide Save method will in turn call the Save method on each resource instance.</p>
Signature	HRESULT Save ([out] Object *pInst);
Input Parameters	None
Output Parameters	pInst – the instance of the Resource to be persisted
Return Value	S_OK – Success E_OUTOFMEMORY – Out of Memory

Description	<p>This method will be used to restore the Resource object from a persistent store. This will be used when the user needs to restore the system configuration from a persistent store. The system wide Restore method will in turn call the Restore method on each resource instance.</p>
Signature	HRESULT Restore ([in] Object *pInst);
Input Parameters	pInst – the instance of the Resource to be restored.
Output Parameters	None
Return Value	S_OK – Success E_POINTER – Null Pointer specified E_OUTOFMEMORY – Out of Memory

Diagrams and Flow Charts:

[To support the description provided above, please include: (a) at least one block diagram showing the architecture of the system that implements your invention, and (b) at least one diagram illustrating the primary steps performed by your invention.]

[click here and type]

Additional Information:

- *List the names of any people who contributed to the invention.*

[click here and type]

- *List any earlier, current or anticipated MS products that may use your invention:*

Valhalla, Windows 5.1, 6.0.

- *List and attach (or provide pointers to) any documents that provide additional information about your invention or the product to which it relates, including specifications, journal articles, slide presentations, test/performance results, etc.]*

[click here and type]

- *List any other sources that would provide helpful background information or illustrate prior work of others in this area (including, e.g., journal articles, text books, product literature, products, and specifications):*

[click here and type]

